

AMENDMENTS TO THE CLAIMS

Claim 1. (cancelled)

2.(original): In a network constituted by a plurality of packet switching systems connected through transmission lines, a route modification method for modifying a label switching path from an old route to a new route, comprising the steps of:

including in a label request for a new route an identifier indicating an old route having a sharable label;

forwarding the label request from a packet switching system located on upstream side to a packet switching system located on downstream side along the new route;

in the packet switching system located on the downstream side, setting the label for the old route to a double reserved state in case the new route being requested in the label request overlaps with the old route, or reserving a new label in case the new route does not overlap with the old route;

notifying the packet switching system located upstream from the packet switching system located downstream about the each reserved label;

forwarding a label release request explicitly specifying the old route to the packet switching system located on downstream side along the old route; and

in the packet switching system, when receiving the label release request, either setting the double reserved label to a reserved state being reserved only for the new route in case the new route overlaps with the old route, or releasing the label for old route in case the new route does not overlap with the old route.

3.(original): In a network constituted by a plurality of packet switching systems connected through transmission lines, a route modification method for modifying a label switching path from an old route to a new route, comprising the steps of:

including in a label request for a new route an identifier indicating an old route having a sharable label;

forwarding the label request from packet switching system located on upstream side to packet switching system located on downstream side along the new route;

in the packet switching system located on downstream side, setting the label for the old route to a double reserved state in case the new route being requested in the label request overlaps with the old route, or reserving a new label in case the new route does not overlap with the old route;

notifying packet switching system located upstream from packet switching system located downstream about the each reserved label;

in the packet switching system located on upstream side, when receiving the reserved label, setting for an old label a release priority higher than a release priority for a new label;

forwarding a label release request to packet switching system located on downstream side along the old route; and

in packet switching system, when receiving the label release request, either setting the double reserved label to a reserved state being reserved only for the new route in case the new route overlaps with the old route, or releasing the label for old route having the higher release priority in case the new route does not overlap with the old route.

Claim 4.(cancelled)

5.(original): In a network constituted by a plurality of optical cross-connect systems connected through transmission lines, a route modification method for modifying a wavelength path from an old route to a new route comprising the steps of:

including in a wavelength request for a new route, an identifier indicating an old route having a sharable wavelength;

forwarding the wavelength request from an optical cross-connect system located on upstream side to an optical cross-connect system located on downstream side along the new route;

in the optical cross-connect system located on downstream side, setting the wavelength for the old route to a double reserved state in case the new route being requested in the wavelength request overlaps with the old route, or reserving a new wavelength in case the new route does not overlap with the old route;

notifying the optical cross-connect system located upstream from the optical cross-connect system located downstream about the each reserved wavelength;

forwarding a wavelength release request explicitly specifying the old route to the optical cross-connect system located on downstream side along the old route; and

in the optical cross-connect system, when receiving the wavelength release request, either setting the double reserved wavelength to a reserved state being reserved only for the new route in case the new route overlaps with the old route, or releasing the wavelength for old route in case the new route does not overlap with the old route.

6.(original): In a network constituted by a plurality of optical cross-connect systems connected through transmission lines, a route modification method for modifying a wavelength path from an old route to a new route comprising the steps of:

including in a wavelength request for a new route an identifier indicating an old route having a sharable wavelength;

forwarding the wavelength request from an optical cross-connect system located on upstream side to an optical cross-connect system located on downstream side along the new route;

in the optical cross-connect located on downstream side, setting the wavelength for the old route to a double reserved state in case the new route being requested in the wavelength request overlaps with the old route, or reserving a new wavelength in case the new route does not overlap with the old route;

notifying the optical cross-connect system located upstream from the optical cross-connect system located downstream about the each reserved wavelength;

in the optical cross-connect located on upstream side, when receiving the reserved wavelength, setting for an old wavelength a release priority higher than a release priority for a new wavelength;

forwarding a wavelength release request to the optical cross-connect system located on downstream side along the old route; and

in the optical cross-connect system, when receiving the wavelength release request, either setting the double reserved wavelength to a reserved state being reserved only for the new route in case the new route overlaps with the old route, or releasing the wavelength for old route having the higher release priority in case the new route does not overlap with the old route.